

The end of the tail, as usual in the *Regaleci*, is obliquely truncated; at the extreme tip there was a small scar or mark.

The length of the head, 9 inches, is contained 11.7 times in the total length, so that it is larger in proportion than usual; according to Lütken the proportion varies between  $\frac{1}{16}$  and  $\frac{1}{21}$ . The head showed the typical form of the genus, and, as in the two older and larger specimens in the Bergen Museum, there are no teeth. The apparatus of teeth, mentioned by Collett, on the first branchial arch seems to have about 40 rays, but the head is so much damaged that it is impossible to state the exact number. The tongue also was lost. The pupil was round and deep black, and the iris silvery white in the fresh animal. The silvery-white body had several black cross bands, of which five larger ones extended across the whole side obliquely from above downwards.

This herring-king therefore differs from the typical *Regalecus glesne* only in its comparatively larger head, its greater depth, and the smaller number of rays in the dorsal; but as these characters are very variable, the specimen may be regarded as a true *Regalecus glesne*.

The distance from the tip of the snout to the anus is about 6 feet, or 75 per cent. of the total length, and a proportion so abnormal that the author concludes that a portion of the tail had been lost, as according to Collett the normal proportion is  $\frac{4}{10}$  instead of  $\frac{3}{4}$ . Hence this animal would normally have measured nearly  $15\frac{1}{2}$  feet in length, which is not unreasonable, as examples have been met with over 5 metres in length, and this supposition is confirmed by the great depth of the body. It must, however, be remarked that the caudal part was complete and smooth with the exception of the fresh lesion at the apex; the form of the tail most resembled that of the Stavanger specimen of 1881.

The individual was a female with a well-developed ovary. The upper part of the intestine was empty, while the lower part contained a yellowish-brown undeterminable fluid.—*Nyt Magazin for Naturvidenskaberne*, Bd. xxx. p. 232.

*Carterius Stepanowii*, Petr. By H. J. CARTER, F.R.S. &c.

This freshwater sponge, which in 1884 was named "*Dosilia* (?) *Stepanowii*" by Dr. W. Dybowski, from a specimen found near Charkow, in Southern Russia ('Annals,' 1884, vol. xiv. p. 60), was also found in 1885 by Prof. Fr. Petr, of the University of Prague, in the neighbourhood of Deutschbrod, in Bohemia, about 60 miles south-east of that city; and his description of it, which is beautifully illustrated, was published in the Czech language at Prague in 1886 ('Dodatky ku Fauně Českých Hrb Sladkovodních,' Tisdem dra. Ed. Grégra v Praze, 1886). It appears to me to be the same as that discovered by Mr. H. Mills, of Buffalo, New York, in the Niagara River in 1880, viz. *Carterius tubisperma* (Proc. Acad. Nat. Sci. Philadelphia, 14th June, 1881, p. 150).

Thus this remarkable genus of *Spongilla*, first brought to notice

by Mr. Ed. Potts, of Philadelphia, in a specimen found in "a small stream in the late Centennial grounds, Fairmont Park, Philadelphia" (*ib.* "about August 1880"), which he then named "*S. tentasperma*," and subsequently "*S. tenosperma*" (*ib.* p. 357), ending with "*Carterius tenosperma*," its present name, has now been found in Southern Russia and mid-Europe, as above stated.

In the same communication also Prof. Petr has described and illustrated, under the "provisional" name of "*Ephydatia bohemica*," another freshwater sponge, found at Kavasetice, in the same district, wherein the statoblast presents an *incipient* condition of the eirrous development characterizing *Carterius*, with a spiculation which appears to me, from the illustrations, to be very like that of his *C. Stepanowii*.

Lastly, Mr. H. Mills, of Buffalo, in a letter dated 20th Nov. 1886, sent me a specimen of *Carterius* from the Niagara River which he considers allied to *C. latitenta*, Potts (*Proc. Acad. Nat. Sci. Phil.* 1882, July 10th, p. 12), wherein the expanded portion of this development presents itself under the form of a cup, with even, circular margin (that is, entirely without eirrous appendages), whose bottom is pierced by the upright tubular part in the usual way; which "form" appears to prevail generally in the statoblasts of this variety.

*On some Optical Properties of the Peristome of Mosses.*

By M. J. AMANN.

The author describes some curious properties of the peristome of mosses when under polarized light. These properties, which have not been described up to the present time, deserve a closer study. According to M. Amann's observations, sometimes the outer layer of the peristome (exostome), sometimes the inner layer (endostome) rotates the plane of polarization and exhibits, when a thin plate of mica or of selenite is interposed, very brilliant colours, varying with the position of the two Nicols relatively to each other. This action of the peristome on polarized light varies from one family or genus to another. It is occasionally almost nil (*Pottiaceæ*, *Weissieæ*); feeble in the *Grimmiaceæ* and *Dicranaceæ*; strong in the *Mniaceæ* and *Hypnaceæ*. There appears to exist a curious relation between these optical properties and the amount of tannin contained in the membranes: thus, those richest in tannin are the most active; the endostome of *Camptothecium lutescens* affords a particularly good illustration in this respect.—*Bibliothèque Universelle, Archives des Sciences*, Dec. 15, 1886, p. 585.